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Evaluating quality strategies in Asia-Pacific countries: survey results

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Abbreviations

AIDS	acquired immunodeficiency syndrome
AIRS	Advance Incident Reporting System
AHSSQA	Australian Health Service Safety and Quality Accreditation Scheme
ASF	Agenda Setting Forum
CPGs	clinical practice guidelines
CME	continuing medical education
CPD	continuing professional development
COAG	Council of Australian Governments
CVP	catheter-related care bundles
ESBL	*extended-spectrum beta-lactamase*
HA	Health Authority
HAI	health care-associated infection
HIRA	Health Insurance Review and Assessment Service of Korea
ICPS	International Classification for Patient Safety
IHSR	Institute for Health Systems Research
ISO	International Organization for Standardization
KACA	Centre for Children with Special Needs, Brunei Darussalam
MRSA	*methicillin-resistant Staphylococcus aureus*
NDRA	National Agency of Drug and Food Control
NHSP-IP	Nepal Health Sector Programme-Implementation Plan
NSQHS	National Safety and Quality Health Service Standards
OECD	Organisation for Economic Co-operation and Development
PhilHealth	Philippine Health Insurance Corporation
PRADET	Psychosocial Recovery & Development in East Timor
QA	quality assurance
QI	quality improvement
SHINe	Singapore Healthcare Improvement Network
SOPs	standardized operating protocols
TGA	Therapeutic Goods Administration
WHO	World Health Organization

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Introduction

Improving quality of care has become a crucial element of health system governance worldwide. Industrialized and transitioning countries are developing ways to measure quality of care and improve policies. Measuring quality is necessary to establish the value of health care and the performance of health systems. Hence, Health System Performance Assessment, as promoted by the World Health Organization (WHO), relies heavily on the assessment of health-care service quality.

Interest in sharing developments on quality of care policies in the Asia-Pacific region, and in setting up a network, were discussed during a preparatory meeting in 2011 in China, Hong Kong SAR hosted by the Organisation for Economic Co-operation and Development (OECD)/Korea Policy Centre. Experts from the Asia-Pacific region concluded that greater dialogue between countries is needed to improve quality of care policies in the region. The experts asked WHO regional Offices for the South-East Asia and the Western Pacific, and OECD to set up a structure to help countries in their reflections. In particular, they suggested:

- getting countries to recognize the key role of quality in strengthening health systems;
- seeking examples of good quality improvement practices from other countries, and identifying how that learning can be applied locally;
- facilitating sharing of evidence of the benefits of quality improvement programmes and policies;
- developing processes and tools to measure quality;
- developing an information infrastructure that supports quality governance; and
- ensuring consistency and the linkage of quality measurement efforts with (national) quality policies on health system input, design, monitoring and evaluation, and improvement.

The first WHO-OECD consultation on quality of care in the Asia-Pacific region (Manila, the Philippines, 2012) discussed various quality improvement strategies applied in health care in Asia-Pacific countries. Representatives of 16 countries agreed on the usefulness of exchanging experiences systematically, and the need to collect more detailed internationally comparative information on quality policies. Three types of information were considered relevant: national quality policies and strategies; national information infrastructure; and ongoing programmatic activities, especially topics where WHO has programmes (such as patient safety). After the meeting, a questionnaire was developed.

The questionnaire

The questionnaire sought general information on health-care quality strategies and policies in Asia-Pacific countries. This included policies to assure: quality health-care system inputs (certification/licensing of health professionals, accreditation of health-care organizations such as hospitals, assurance of safe pharmaceuticals, devices and blood products); standardization and monitoring of health-care delivery (guidelines, indicators); and accountability and performance (public reporting, financial incentives). The questionnaire specifically emphasized patient safety and patient-centredness. Countries were also asked to provide information on the extent to which each policy approach had been developed, including, where possible, through quantifiable indicators and timelines for implementation.

The questionnaire had three parts:

- Part 1: general questions on quality of care policies;
- Part 2: information infrastructure for measuring quality of care; and
- Part 3: quality improvement initiatives and activities.

The questionnaire was drafted by the OECD and drew heavily on the existing OECD survey on quality of care. The questionnaire was then finalized through teleconferences among WHO regional offices for South-East Asia and the Western Pacific, OECD, OECD/Korea Policy Centre, and discussions with national experts.

For all Member States except Pacific island countries, the questionnaire was distributed by WHO from July to August 2013, along with guidelines for completion. For Pacific island countries, a modified version of Part 3 was distributed because of concerns about the burden to fill in many surveys. Information was collected from October 2013 to April 2014, through WHO country offices or ministries of health where no WHO offices exist. In early 2014, Pakistan joined the survey.

Thirty-four countries and economies (hereinafter "countries") filled in at least one part of the questionnaire. Twenty-six countries responded to Part 1. Twenty-three countries responded to Part 2. Twenty-five countries responded to Part 3. Table 1 provides the list of countries that answered each part of the questionnaire.

Table 1. Countries that responded to the questionnaire

Preliminary findings were discussed at the second WHO-OECD consultation on quality of care in the Asia-Pacific region (Bangkok, Thailand 2013)

The survey responses reported follow the wording used by respondents for names of institutions and documents.

Part 1: Quality of care policies

1.1 Overview of quality of care policies

Quality of care policies promote evidence-based, accessible, safe and patient-centred health care. Almost all countries responding to the survey report having policies or documents for quality of care. The exceptions are China and Timor-Leste. Examples of quality policies include China, Hong Kong SAR's *Sentinel and Serious Untoward Event Policy* and Malaysia's *Strategic Plan for Quality in Health*. Further examples of quality policies are provided in Table 2. Twenty-one countries have specific quality or safety targets with set timelines. For example, Sri Lanka reports the use of *Standards for neonatal care*.

Table 2. Policies or documents for quality of care

Organizations assuring quality of care exist in most countries. This oversight role is generally adopted by public agencies, and specifically by ministries of health in 20 countries. Pakistan takes a different approach, with local governments and the Ministry of Science and Technology responsible for quality of care. In Japan, an independent organization – the Japan Council of Quality Health Care – oversees the accreditation process. Organizations responsible for quality of care are listed in Table 3.

Table 3. Organizations responsible for quality of care

1.2 Legal framework for quality of care

Quality of health care laws generally regulate three areas: professionals, institutions and safety of drugs and devices. Twenty-three countries report having a legal framework for quality of care. Quality-related laws can be general or specific. In most countries, the legal framework refers to laws regulating medical services in general, as demonstrated in Table 4. New Zealand has more specific acts related to quality of care. Six countries report that they have general laws with detailed enforcement decrees. Japan notes that most of its laws related to quality of care are general, whereas long-term care insurance law includes detailed articles.

Table 4. Legal and regulatory framework for quality of care

1.3 Professional certification/licensing and re-certification

Well-trained doctors and nurses constitute the backbone of a health-care system. However, medical knowledge and skills need to be regularly updated. Policies related to licensing, mandatory continuing professional development (CPD) and professional certification and re-certification can assure professional performance. Almost all countries have professional certification/licensing and re-certification systems, as shown in Table 5. Sixteen countries have policies for mandatory continuing medical education (CME), professional development and re-certification/licensing. Japan and Nepal have CME, but without mandatory enforcement. Although several countries have mandatory CME/CPD, only a few have re-certification or re-licensing based on mandatory CME/CPD. Other countries report having CME/CPD policies, but it is uncertain whether the policies are mandatory. In most countries, health-related government agencies are in charge of managing professional certification/licensing and re-certification.

Table 5. Policies for mandatory CME/CPD and re-certification

1.4 Accreditation and other external quality assessment mechanisms

Accreditation assures quality by systematically evaluating hospitals against set standards. Nineteen countries report having a hospital accreditation system. In many Asia-Pacific countries, the system is public, or in partnership with the government. In most OECD member countries, accreditation is driven by expert groups. The responsible agencies are listed in Table 6.

Some countries model their accreditation schemes after large international programmes. For example, Bangladesh, Japan and the Republic of Korea report using standards of The Joint Commission in the United States of America and Joint Commission International. Under the requirements of The Joint Commission programme, health services must undergo an onsite survey every three years to earn and maintain accreditation.

Meanwhile, China, Hong Kong SAR and China, Macao SAR have adopted the approach of the Australian Council on Healthcare Standards, which uses a four-year continuous quality assessment and improvement accreditation scheme including two onsite surveys supported by a self-assessment system. Seventeen countries have national standards for hospital accreditation.

In 11 countries, the accreditation scheme is voluntary for hospitals. In some countries, including Cambodia, the Democratic People's Republic of Korea and Nepal, hospital accreditation is mandatory. In Sri Lanka, accreditation is partially mandatory. In New Zealand and the Republic of Korea, participation is voluntary for some providers, yet in effect mandated through a fee schedule contracting process and other practices.

In Singapore, although hospital accreditation is voluntary, there is a mandatory licensing system for hospitals and other health-care institutions.

Most countries conducting accreditation use some form of scoring system. Twelve countries run additional mandatory programmes, such as an inspectorate of health. In most countries in the Asia-Pacific region, accreditation for quality improvement and inspection for safety control are integrated into one model.

Certification by the International Organization for Standardization (ISO) is a method of assuring quality. ISO develops voluntary standards internationally. Twenty countries have ISO certification initiatives. In most cases, it is being used as a supplementary measure to complement basic quality assessment programmes.

Table 6. Policies for accreditation and other external quality assessment mechanisms

1.5 Medical devices, blood products and pharmaceuticals

Assuring the safety of health-care technologies is an important part of national quality policies. Once products are allowed on the market, mechanisms should be in place to assure their safe and appropriate use. This is particularly the case for medical devices, blood products and pharmaceuticals.

Fourteen countries report that they carry out technology assessment studies to assess the added value of new technologies. The results of these studies inform decisions to reimburse the use of new devices. The organizations responsible for technology assessments of medical devices are listed in Table 7.

Table 7. Technology assessment for medical devices

Most countries have standards for safe blood use, and preparation and handling of blood products. Blood safety-related organizations, institutions or acts in each country are listed in Table 8.

Table 8. Standards on safe blood use

Fifteen countries report that they carry out technology assessment studies to assess the added value of new drugs, and the results of these studies inform the reimbursement decision process. The policies or organizations in charge of technology assessment studies on drugs are listed in Table 9.

Table 9. Technology assessment studies on drugs

Many countries report that they have pharmacovigilance systems to identify safety and other problems with pharmaceuticals. The policies and organizations responsible for pharmacovigilance are listed in Table 10.

Table 10. Pharmacovigilance systems

1.6 National audit studies and performance reports

Audit studies can assess the quality of care in areas where problems are likely. This includes perinatal death, mortality related to anaesthesiology and major surgical complications, for example in cardiothoracic surgery. Fourteen countries report that they conduct national audit studies. One example is Malaysia's Perioperative Mortality Review. Other examples are provided in Table 11.

Table 11. National audit studies

1.7 Practice guidelines

In many countries, evidence-based practice guidelines play a key role in quality policies. Such guidelines draw on clinical research to assist health professionals and patients make decisions about appropriate health care. Twenty-three countries report they have developed clinical practice guidelines (CPGs).

The government developed CPGs in 18 countries, and in some countries the private sector participated in the process. In the Republic of Korea, the private sector led the process under the supervision of the government. In New Zealand, the guidelines were mostly developed by expert groups. Fifteen countries report that CPGs were developed on evidence-based medicine.

Most countries have guidelines for hospital and primary care. Fewer countries have guidelines for mental health and long-term care. Most guidelines are developed by expert groups with government support and coordination. Table 12 reports the main features of CPGs by country.

Table 12. Clinical practice guidelines

Bangladesh and Brunei Darussalam report that guidelines dissemination is the government's responsibility. In 12 countries, the guidelines are online, in eight countries the guidelines are distributed at workshops and conferences. Ten countries report using incentives to encourage compliance with guidelines, while 18 countries report conducting studies to assess compliance with guidelines, as shown in Table 13.

Table 13. Disseminating mechanisms, incentives, studies regarding CPGs

1.8 Quality indicators

Collection of information on health-care quality indicators can help to improve the performance of health services in areas such as acute and primary care, cancer, mental health and the patient experience. Eighteen countries report the existence of national quality indicators, but only a few – including Malaysia, the Republic of Korea and Singapore – have provided the list of indicators. Table 14 shows the availability of national quality indicators, and the existence of mechanisms to assure consistency at different levels of systems. Almost all countries report having systematic feedback mechanisms for health providers, but the level of detail varies between countries.

Table 14. Quality indicators and consistency assuring mechanisms

1.9 The ability of patients to influence quality and policies on measuring patient experiences

High-quality health care places the patient at the centre, and provides an opportunity for patients to give feedback on their experiences in the health system. All countries report that they have mechanisms for patients to provide feedback on quality of care. In 16 countries, the systematic measurement of patient experiences has been implemented nationwide. In Japan, the Ministry of Health, Labour and Welfare conducts a patient

experience survey every three years. In some other countries, only public hospitals conduct a patient experience survey. Table 15 shows the systematic measurement of patient experiences by country.

Table 15. Systematic measurement of patient experiences

Patient organizations exist in most countries, including the Bangladesh Thalassemia Foundation and SMARTER Brunei in Brunei Darussalam. While Indonesia has similar organizations, they are not yet involved in the quality improvement process. Representative patient organizations are listed in Table 16.

Table 16. Patient organizations

1.10 Public reporting on quality of care

Public reporting on quality of care empowers consumers to access information about the performance of health services, and enables hospital benchmarking. Sixteen countries indicate the existence of public reporting on quality of care. In most cases, quality of care assessment results are published online by the government. Seventeen countries publish regular national reports on quality of care, and eight countries say these reports have been influential in changing health policy and practice. The survey results on public reporting on quality of care are shown in Table 17.

Table 17. Public reporting on quality of care

1.11. Financial incentives

Pay for performance schemes are used in some countries to encourage delivery of high-quality health services. Under these schemes, financial incentives are offered to health services or practitioners to improve quality. Seven countries report having some form of pay for performance system. Among them, the Republic of Korea, New Zealand and Thailand present quality indicators to institutions and provide incentives based on results. In Cambodia, health service accreditation status is linked to payment.

Table 18. Pay for performance

1.12 Patient safety and medical malpractice

Promoting safety is critical to provide high-quality patient-centred care. Some countries have detailed patient safety strategies, and collect data on sentinel events and adverse events. The aim of monitoring these incidents is to learn from them, to try to prevent future adverse events.

Sixteen countries report having a national patient safety programme. Table 19 provides more information on these programmes. In several countries, patient safety is included in the hospital accreditation process. For example, a comprehensive nationwide patient safety programme was developed in Malaysia.

Table 19. Patient safety

An adverse event reporting system is in place in 11 countries (see Table 20). The table also shows that 18 countries have systems to address medical malpractice.

Table 20. Adverse event reporting or medical malpractice addressing system

	+	Australian Health Practitioner Regulation Agency and National Boards State-based health complaints commissions
	+	Bangladesh Medical & Dental Council Bangladesh Nursing council
	+	BMB
	+	Cambodian Medical Council
	+	Department of Health Hospital Authority

1.13 Infection control policies

Infection control policies that include hand hygiene initiatives, sterilization of equipment, guidelines and appropriate use of antibiotics help to reduce the risk of infections and promote patient safety. Some countries use quality indicators relating to health care-associated infection (HAI) to measure the performance of health services, and enable hospitals to be benchmarked against their peers.

Nineteen countries have quality indicators and performance measures on infection control policies. Among these countries, nine report having nationally standardized quality indicators on HAIs. Most countries have health-care policies or programmes to prevent the spread of infection, as described in Table 21.

Table 21. Infection control policies

Open for Better Care Campaign

National Infection Control Guideline

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Part 2: Information infrastructure questions for measuring quality of care

2.1 Data set at national level

A critical first step to improve quality is the ability to measure it. This requires robust data infrastructure. Nationally consistent data can help monitor health system performance, identify system failings, inform policy-making and assist in decision-making on health resource allocation. Ideally, data infrastructure should enable a patient to be monitored over time, to follow their journey through the health system and examine their outcomes. Twenty-three countries filled in Part 2 of the questionnaire. Twenty-two countries report the availability of national hospital inpatient data, while 18 countries have national primary care data. Almost all countries (21) have national mortality data, population health survey data and population census registry data, and 16 countries have mental health data. As Table 22 shows, fewer countries have national data around cancer registries, prescription medicines, long-term care and patient experience.

2.2 Custodian at national level

Almost all the countries have a custodian responsible for management of hospital inpatient data, mortality data, population health survey data and population census or registry data. Fewer countries have a data custodian for primary care, cancer registry, prescription medicines, long-term care, psychiatric inpatient care and patient experience. In most countries, the Ministry of Health is responsible for managing the data.

2.3 Estimated proportion of service/ population coverage

Table 22 shows the number of countries providing information on the target population or health services covered by the data. Thirteen countries have provided information on this for hospital inpatient data, while the numbers are smaller for other areas. In cases where the proportion covered is less than 100%, 16 countries provide a reason or examples of criteria for exclusion for mortality data, and 15 for hospital inpatient data. The numbers are smaller for the other areas.

Table 22. National data

2.4 Sources of data used to create the dataset

Table 23 shows that paper medical records are the most common source of data used by countries. Eighteen countries produce hospital inpatient datasets based on paper records, while 17 countries do this for mortality data and 14 for primary care patient data. The second most common source of data is automatic extraction from medical records, with seven countries doing this for hospital inpatient data. Some countries use paper insurance claims records to produce datasets, with six countries doing this for hospital inpatient data. Six countries use electronic insurance claim records for hospital inpatient data.

Table 23. Type of data available

2.5 Standards or guidelines for collecting the data

Data standards or guidelines can help ensure that data is collected consistently across health services, so that the data are comparable. Twenty-one countries report that they have standards or guidelines for hospital inpatient data collection, as shown in Table 24. Twenty countries have them for the collection of mortality data, and 17 countries have them for primary care data.

Table 24. Standards or guidelines for data collection

2.6 Adherence to a global health data standard

Seventeen countries report following a global health standard while collecting hospital inpatient data, as shown in Table 25. Sixteen countries adhere to a global health standard in collecting mortality data, and 11 in collecting primary care data.

Table 25. Global health data standard

2.7 Records for patients

Table 26 shows the countries that report data collection at the individual patient level, by tool for data collection and type of care. Individual level data are available in mortality datasets in 17 countries, hospital inpatient datasets in 15 countries, and in primary care datasets in 12 countries. Patient experiences survey data are available at the individual level in only five countries.

Table 26. Data containing records for patients

2.8 Unique patient identification number

A unique patient identification number can be used to electronically link and retrieve an individual's health records across multiple databases. It can be an important contributor to quality of health care, and improve a patient's care coordination across health services. As Table 27 shows, 15 countries have a unique patient identification number in hospital inpatient datasets and in mortality datasets. Twelve countries have such a number in primary care, and 11 countries have such a number in psychiatric hospital inpatient care. Only four have such a number for patient experience datasets.

Table 27. Data containing unique patient identification number

2.9 Unique patient identifier generated or used exclusively by the facility

In nine countries, a patient unique identifier is generated or used exclusively by the facility for hospital inpatient data, and in ten countries for mortality data. Table 28 provides more information on the use of unique patient identifiers by facilities.

Table 28. Unique identifier used by the facility

2.10 ID system to link the data

Seven countries report having a national ID or health service ID system that can link hospital inpatient data across providers. This can be done for mortality data in nine countries, while six countries can do this for primary care data. Table 29 lists the countries that have the possibility of data linkage, by tool for data collection and type of care.

Table 29. Link to another data set

2.11 Data used to regularly report on health-care quality

Table 30 shows that 13 countries regularly use data for health-care quality reporting in the hospital inpatient setting, while 11 countries use primary care data. Only five countries do this for patient experience surveys.

Table 30. Regularly report on health-care quality

2.12 Indicators used to regularly monitor health-care quality

Eleven countries report use of quality indicators to monitor hospital inpatient care and mortality. Ten countries use quality indicators to monitor population health, and nine to monitor primary care. Table 31 provides more information on the use of indicators to monitor health-care quality.

Table 31. Examples of indicators on health-care quality

2.13 Difficulties in regular monitoring of health-care quality

Many countries encounter difficulties in regularly monitoring health-care quality. As Table 32 shows, 18 countries cite a lack of resources or technical capacity for data collection, analysis and use. Fifteen countries have concerns about data quality, which can limit their usefulness. Meanwhile, nine countries report legal or policy barriers to the collection or analysis of data.

Table 32. Difficulties in regular monitoring of health-care quality

2.14 Comparison with the past five years

Five countries – Bhutan, Cambodia, the Lao People's Democratic Republic, Malaysia and Singapore – report that it has become easier to use personal health data to monitor health and health-care quality in the past five years. As shown in Table 33, three countries report it has become harder, while for two – Indonesia and Pakistan – it has become much harder. Viet Nam reports it has become harder/much harder. Notably, no country reports that it has become much easier.

Table 33. Comparison with the past five years

	9	3	2

Note Viet Nam chose 4 (harder) and 5 (much harder)

2.15 Expectation over the next five years

Malaysia, Nepal and Timor-Leste expect it to be very likely that they will be able to use personal health data to regularly monitor health-care quality over the next five years. Notably, no country believes it is unlikely or very unlikely that it will use personal health data to regularly monitor health-care quality in the future. More information on countries' expectations for the next five years is provided in Table 34.

Table 34. Expectation over the next five years

	5		

Note Viet Nam chose 2 (likely) and 3 (unsure)

Part 3: Quality improvement initiatives and activities

This section describes initiatives for quality and patient safety improvements. Numerous policy initiatives to systematically evaluate and improve the quality of care of health services have been undertaken. The most common initiatives are hospital accreditation and the development of national quality improvement plans. There are also examples of programmes to develop guidelines, standards and indicators, and national initiatives to measure patient experiences and improve patient safety. Also, WHO patient safety and quality improvement programmes have been adapted, including SAVE LIVES: Clean Your Hands, WHO surgical safety checklist and implementation manual, and WHO Patient Safety Curriculum Guide. Such programmes can facilitate the exchange of good practice between countries.

3.1 SAVE LIVES: Clean Your Hands

The annual SAVE LIVES: Clean Your Hands initiative is part of a global campaign to improve hand hygiene among health workers. This initiative is part of the WHO First Global Patient Safety Challenge: Clean Care is Safer Care, which was launched in October 2005, and is aimed at reducing HAI worldwide. As of April 2012, 127 health ministers have pledged commitment to reducing HAI and to supporting the work of the WHO. Over 40 countries and areas have also started hand hygiene campaigns during this time.

The survey results show that almost all countries have been working on this initiative and/or hand hygiene to some extent. Australia's National Hand Hygiene Initiative is based on the SAVE LIVES: Clean Your Hands campaign. Some countries report significant improvements in hand hygiene compliance. For example, China, Hong Kong SAR, shows a significant increase in the compliance rate at general hospitals from 38.3% in 2007 to 75.5% in 2012. Malaysia reports a gradual increment in hand hygiene compliance from 56.6% in 2008 to 82.2 % in 2012. This was accompanied with a reduction in HAI from 3.57 per 100 patients surveyed in 2007 to 1.51 per 100 patients surveyed in 2012.

Other successful adaptation examples include the regional Clean Care is Safer Care workshop (Thailand, 2007), and the 'Clean Ward' campaign to establish standards and ensure compliance, in the maternity unit at Vila Central Hospital in Vanuatu.

3.2 WHO Surgical Safety Checklist and Manual

Surgical procedures are intended to save lives, however unsafe surgical care can cause substantial harm. The WHO Second Global Patient Safety Challenge: Safe Surgery Saves Lives, initiated in 2007, addresses the safety of surgical care.

The goal of the Safe Surgery Saves Lives Challenge is to improve the safety of surgical care around the world by ensuring adherence to standards of care. Evaluation of WHO's 2007-2008 pilot study of the Surgical Safety Checklist showed improved compliance with standards and decreased complications from surgery in all eight pilot hospitals. These findings have been confirmed by recent studies indicating the use of checklists significantly reduces surgical morbidity and mortality. New versions of the checklist, implementation manual and guidelines were released in September 2009.

Around two-thirds of countries' responding to the survey mentioned implementation of the WHO Surgical Safety Checklist. However, only a limited number of countries have completed national implementation and this is not necessarily mandatory.

Compliance with the checklist is a challenging issue. Thailand mentions that low compliance reflects different work patterns and cultural norms and that checklist training and enforcement is needed to improve compliance. Vanuatu points to frequent changes in leadership and staffing as a cause of poor implementation and adaptation, because new staff are not well-oriented. This can result in overlooking standards, inconsistency to rules, and a tendency to fall short of the requirements.

In China, Hong Kong SAR, use of the surgical checklist has been extended beyond operating theatres. For example, 'Bedside Procedure Surgical Safety' emphasizes the implementation of safety checks for at least two bedside procedures, namely, chest tapping and insertion of drains, and insertion of intravascular catheter with the use of guide wire, aiming to avoid wrong side tapping and retention of guide wire respectively. In Fiji, various checklists have been implemented, including intravenous care bundles-IV checklist, catheter-related care bundles-central venous catheter (CVP) lines/femoral lines checklists, surgical infection control bundles – use of surgical site infection surveillance forms, pre-operative checklists, anaesthetist checklists, and ventilator-related care bundles. The use of these checklists is subject to regular compliance audits.

3.3 WHO Patient Safety Curriculum Guide

The Patient Safety Curriculum Guide: Multi-professional Edition (WHO, 2011) promotes the need for patient safety education. The comprehensive guide assists universities and schools of dentistry, medicine, midwifery, nursing and pharmacy to teach patient safety. The guide also supports training of all health-care workers on priority patient safety concepts and practices.

A few countries, such as Sri Lanka and Vanuatu, have used the guide.

In Sri Lanka, the guide has been included in the Master of Science and Doctor of Medicine curriculums of medical administration (partially). It will be included in undergraduate medical and nursing curriculums. In Vanuatu, the guide was adapted and incorporated into the Vanuatu College of Nursing Education curriculum. The guide has been translated into local languages in Cambodia, China, Japan, the Lao People's Democratic Republic, the Republic of Korea, Mongolia and Viet Nam.

In Thailand, the Healthcare Accreditation Institute (a public organization), in collaboration with universities and health-professional schools, is planning to develop a multi-professional patient safety curriculum for health-care undergraduates in 2014. This newly developed curriculum should align with the WHO guide, and the local health-care delivery context. The aim is that all health professional learning includes patient safety competencies.

3.4 The adaptation and promotion of QA/QI trainings

Quality assurance (QA)/quality improvement (QI) trainings are essential to continuous improvement of quality of care. Around two-thirds of countries have implemented some QA/QI trainings. In Malaysia, QA/QI activities have been an integral part of the National Quality Assurance Programme. The Institute for Health Systems Research (IHSR) has developed QA training modules, which have been used to train international participants from Western Pacific Region countries including Brunei Darussalam, Cambodia, China, the Lao People's Democratic Republic, Mongolia, Papua New Guinea, the Philippines and Viet Nam.

In Cook Islands, hospital and community health service managers participate in QA/QI trainings. In Fiji, facility-based QI committees regularly review implementations and recommendations, and discuss strategies for quality improvement. In Kiribati, the QA/QI programme was implemented in 2009. The programme officers are now working with all health programmes including safe motherhood, reproductive health, integrated management for childhood illness, clinical practices (ICLN) and clinical waste management. The first QA/QI initiative resulted in reduced waiting times to see outpatient doctors.

In Singapore, the five-day Patient Safety Executive Development Programme was jointly conducted by Institute for Healthcare Improvement and a local faculty in 2011. The programme enabled quality improvement leaders to drive effective patient safety and quality improvement programmes in their respective institutions.

Vanuatu reports that, although two senior nurses attended the QA/QI training, implementation of QA/QI activities has not occurred due to the lack of a supportive environment, other competing priorities and a lack of motivation.

3.5 Conceptual framework for the International Classification for Patient Safety

A standardized classification for patient safety concepts will support the sharing of learning across health-care systems. WHO developed a conceptual framework for the International Classification for Patient Safety in 2009. Only a few countries have used the conceptual framework.

In Australia, the International Classification of Patient Safety (ICPS) has been used as the basis for national definitions. In China, Hong Kong SAR, an electronic system, the Advance Incident Reporting System (AIRS), was introduced in 2004 to enable frontline staff to report incidents directly, thereby facilitating prompt management responses to support patients and staff. The AIRS has been enhanced by following the conceptual framework. In the Republic of Korea, the conceptual framework is translated into Korean and is used in some hospitals.

3.6 Other Initiatives and Activities

In Australia, the key national drivers for safety and quality improvement are the National Safety and Quality Health Service (NSQHS) Standards and the Australian Health Service Safety and Quality Accreditation (AHSSQA) Scheme. The NSQHS Standards ensure safety and quality requirements are consistently applied in health care across Australia. Further, the NSHQS standards enable performance comparison across sectors, regions and types of services. The NSQHS Standards form part of the AHSSQA Scheme. The AHSSQA Scheme builds on previous accreditation arrangements and provides for the national coordination of accreditation processes.

Other unique initiatives include:

- An electronic discharge summary system to provide patient safety and quality of care during transfers between acute health-care settings and general practitioners;
- Clinical quality registers for high-risk devices to enhance the long-term monitoring of high-risk implantable breast and cardiac devices and improve patient safety;
- A WHO Patients for Patient Safety Workshop (Australia, 2009) has contributed to the identification of patients for patient safety champions.

Cambodia developed tools and conducted hospital and health centre assessments in 2007, and updated them in 2012. In Fiji, clinical audits on adherence to guidelines and policies are conducted quarterly in each divisional and sub-divisional hospital by risk managers and infection officers. This includes emergency trolley audits, patient satisfaction surveys and waste-care audits. In addition, the Clinical Services Network meets regularly to review and develop protocols, standard operating procedures and guidelines. The implementation of strategies is discussed further at the National Clinical Services Planning meeting quarterly.

In 2007 in China, Hong Kong SAR, the Health Authority (HA) implemented the Sentinel Event Policy of mandatory reporting of nine categories of incidents. The HA Head Office compiles annual reports on sentinel events and serious untoward events for submission to the HA Board and public release. A 'Risk Alert' bulletin is issued quarterly and a there is a half-yearly Patient Safety Forum to share lessons learnt from sentinel events and serious untoward events. The HA has joined the 'Global Patient Safety Alerts' platform to facilitate learning and sharing.

Malaysia has conducted corporate culture training, where soft skills are promoted as part of the quality culture. Palau has developed ward routines, which integrates the work of all clinicians and health-care providers including doctors, nurses, ancillary, kitchen, maintenance, janitorial and relevant ministry agencies, to ensure patient safety and optimum standards are maintained.

Singapore joined the global WHO High 5s Project (established in 2006), together with Australia, Canada, France, Germany, the Netherlands, Trinidad and Tobago, and the United States of America. Ministries of health coordinate the project, which aims to implement innovative, standardized operating procedures (SOPs) for three patient safety solutions over a five-year period. Singapore started with the correct site surgery SOP in 2009. Since then, hospitals in Singapore have made significant changes in their surgical safety culture and workflow in operating theatres. In 2012, Singapore's first Public Hospital Quality Agenda Setting Forum (ASF) led to the establishment of Singapore Healthcare Improvement Network (SHINe) to build QI capability, capacity and culture. Based on the priorities identified during the ASF, in 2014 SHINe launched its inaugural Large Scale Initiative to Reduce Harm in Patients.

Sri Lanka has a patient safety poster competition for undergraduates in medicine and nursing schools, to improve awareness. Other initiatives include:

- A working group on health-care quality and safety, established through the Sri Lanka Medical Association, to bring medical administrators, medical consultants, retired consultants, university academics and the private sector under one umbrella. The committee meets once a month.
- A holistic approach to improve quality and safety in hospitals using Japanese management practices such as '5S', with the principles 'Quality Health Care through Productivity' and 'Quality Fails when Systems Fail'.

In Thailand, the Healthcare Accreditation Institute promotes the six patient safety goals, 'SIMPLE': safe surgery, infection control, safe medication, patient-care process, line/tubing/catheter, and emergency response, achievable by following 31 action items.

Concluding remarks

The survey was well received by countries, and we appreciate their participation in this project. Thirty-four countries filled in at least one part of the questionnaire, including all WHO Regional Office for South-East Asia countries. The questionnaire format was adequate, and the process of data collection sound.

The outcome of this study confirms the importance of the WHO-OECD expert network to facilitate communication / dissemination of evidence on quality improvement programmes and policies among countries. The results provide a useful overview of quality strategies and policies, and show increasing commitment to quality of care in the region.

Policy initiatives have been implemented in many countries in the Asia-Pacific region, in recognition of the key role quality plays in strengthening health-care systems towards universal health coverage. Accreditation programmes for hospitals and the development of national quality improvement plans seem to be the most common types of initiatives. There are also examples of programmes to develop guidelines, standards and indicators, as well as national initiatives to measure patient experiences and improve patient safety.

The outcome of the survey paves the way to strengthen the expert network activities, calls for monitoring developments of quality improvement programmes and policies, and fosters the key role of quality improvement in universal health coverage.

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